Florida Southern College
McDonald and Johnson Avenues
Lakeland
Polk County
Florida

HABS No. FL-323

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

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HISTORIC AMERICAN BUILDINGS SURVEY

FLORIDA SOUTHERN COLLEGE HABS No. FL-323

Location: McDonald and Johnson Avenues, Lakeland, Polk County, Florida.

Florida Southern Collge is architect Frank Lloyd Wright's largest collection of buildings and their design covered the longest period of his time.

The College's president, Dr. Ludd M. Spivey, and Mr. Wright embarked on this project with no written agreement, only a handshake. When the first building came in five times over the budget, and when succeeding designs were still four times more expensive than anticipated, these two men decided to build the campus with student labor.

Mr. Wright would send blueprints from Taliesin for each building. These prints would be without dimensions or details. Mr. Wright would also send several of his students with the drawings. Mr. Wright's students would then make such working drawings and details as were necessary to construct the buildings. Dr. Spivey's students would then take time from their classes to build the buildings. Steel frame, concrete, glass, cypress, and coquina were used in the construction of the buildings.

Photocopies of drawings courtesy of Florida Southern College are included in the HABS photo-data book. The drawings were selected by Nils M. Schweizer as those most representative of the project. Mr. Schweizer was the last student of Mr. Wright to work at Florida Southern. Among the drawings are the four Master Plans for the campus which show Mr. Wright's ideas over a period of almost twenty years for his "College of Tommorrow."

The following pages are photograph indexes to photocopies of the drawings. Both the plate number and HABS photo number are the same for each photocopy. Note that in some indexes misnumberings of the plate numbers are indicated. Indexes with written data are descriptions of the drawings.

PLATES 1-4 CAMPUS PLAN

Plate 1, HABS No. FL-323-1:

The original master plan for the new campus of Florida Southern Collge, by Frank Lloyd Wright.

The existing citrus grove with trees on thirty-six foot centers is clearly shown. Mr. Wright designed the promenades to protect the students from Florida's frequent showers and unkindly summer sunshine. In order to save as many of the citrus trees as possible, the promenades were threaded between the trees at ninety, sixty, and thirty degree angles. This angle relationship also suggests the form of the chapel, theatre, music building and a portion of the library.

The waterdome was to be a gigantic evaporative cooling fountain whose cool waters were to be piped to all of the buildings. Mr. Wright disregarded the fact that very little evaporative cooling is accomplished when the relative humidity is 90%. This fact, along with mechanical problems, prevented the waterdome from ever being used. Its form, however, is echoed in the library and the outdoor theatre.

Mr. Wright's ecological consideration in saving the citrus trees was thwarted by a heavy freeze which killed the citrus in one night.

Absent from this master plan was the existing president's home, which Mr. Wright intended to have removed. Mr. Wright was again thwarted, this time by the president's wife, who insisted that her house would remain.

Plate 2 (misnumbered Plate 3), HABS No. FL-323-2:

This is the first revision of the master plan, made in 1944. The buildings along the bottom of the plan have been drastically revised and some of the promenades have been changed. The dwellings, adjacent to the studios, (shown in the center of the plan) were Mr. Wright's attempt to integrate campus life by locating faculty housing in the center of the campus. The faculty could then be in close and constant contact with the students. This feature was later eliminated, probably by faculty insistance.

Mr. Wright has penciled in his familiar, wavy, "Take-Out" symbol on the planting shown vertically on the drawings (and incidentally, laid out across the contours of the hillside). At his point, Mr. Wright is still holding out for removal of the president's house.

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Plate 3 (misnumbered Plate 2), HABS No. FL-323-3:

This is the second revision of the master plan. Mrs. Spivey, the president's wife, has won her point. Her home has been included, although, Mr. Wright has neglected to provide her any access. Mr. Wright has had to reorient the outdoor theatre and swimming pool to accommodate Mrs. Spivey.

The Manual Training and Domestic Science building in the upper left has been enlarged and renamed "Industrial Arts."

The Arboretum and Astronomy building has become the "Cosmology" building. Cosmology is defined as 'The branch of philosophy dealing with the origin and general structure of the universe, with its parts, elements, and laws, and especially with such of its characteristics as space, time, causality and freedom.'

The location of the theatre has slipped down the hillside and the original citrus trees seem to have disappeared.

Plate 4, HABS No. FL-323-4:

The last master plan, drawn in 1957, two years before the architect's death. This is the campus as he last conceived it. The buildings have taken on the name of their sponsors.

In the upper left corner is Ordway Industrial Arts Building. To its right is Joseph Reynolds Hall, part of the existing campus before Mr. Wright's arrival.

In the Center, left, are three small seminar buildings: Carter, Hawkins and Walbridge.

The Cosmology building has sprouted a new wing. The president's house now has a driveway and a street has been placed along the shores of Lake Hollingsworth.

The major chapel has become the Pfeiffer Chapel in the center of the campus.

The minor chapel has been rotated thirty degrees and named the Danforth Chapel.

The waterdome is now the Edgar Wall Water Dome.

The Watson Administration Buildings and the E.T. Roux Library have both found sponsors.

The music building and the ampitheatre remain sponsorless and therefore were never built. Rumor is that a prospective donor had a personal conflict with Mr. Wright and withdrew financial support.

Altogether, eleven structures were conceived. Nine were built.

PLATES 5-8 SEMINAR BUILDINGS

Plates 5-8, HABS No. FL-323-5 thru -8:

These are the first buildings designed on the campus by Mr. Wright. These three buildings are constructed of a concrete block of Mr. Wright's design. Mr. Wright was looking for a building material that would be indigenous to the area. He attempted to duplicate coquina, a limestone-shell conglomerate by using various mixtures of concrete and aggregrates. Sample blocks, made of different mixes, were pressed in special forms on the site. Mr. Wright then selected the mix and color he preferred. Rather than waste these different sample blocks, they were incorporated into a rear wall in one of these buildings where they can still be seen displaying their varying colors.

Plate 5, HABS No. FL-323-5:

Floor plan of one of the seminar buildings. This plan clearly shows the three foot by three foot module that Mr. Wright used to design the entire campus. If citrus trees are spaced on 36 foot centers, what better module that three feet by three? These three classrooms are grouped around an "T" shaped loggia. Each classroom has its own skylight. The rectangle at the right of the drawings is used to site the buildings in relation to the street intersection.

Plate 6, HABS No. FL-323-6:

Elevation of one of the seminar buildings. Erasures on the west elevation (center drawings) show design changes made on the column holding up the arcade roof. This created a new relationship between the column and the building. The change in this column and its capital was then carried throughout all the arcades.

Note that the arcade has a clearance of only 6'-9". Mr. Wright did not accept tall men as a given. He is reputed to have stated that is all doors in America were 6'-8" then there was no reason for making ceilings any higher. The Florida Southern basketball team might disagree with him.

Note that the walls overhang their bases. Air is admitted through this overhang to provide ventilation.

There are no windows in this building. Light comes in through skylights and the walls. The concrete blocks have small colored glass inserts. When the sun strikes these walls, the interior spaces dance with indescribable beauty.

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Plate 7, HABS No. FL-323-7:

Section through the building.

Plate 8, HABS No. FL-323-8:

Plan of the three seminar buildings, made at a later date, showing their relationship to each other and to the arcade. The arcade has now been promoted to an "Esplanade."

The rooms in these buildings proved to be too small of their intended use. The seperate buildings have now been joined into one building and with an addition. They now serve as the business office of the College.

PLATES 9-10 TYPICAL ESPLANADE CONSTRUCTION

Plate 9, HABS No. FL-323-9:

Plan and section of the esplanade and columns. Note the penciled changes at the bottom of the columns where the footings have been extended an additional 2'-0" to help overcome the overturning created by the cantilever roof. The reinforcing in the roof is a mesh that is no longer used today.

The flower box at the base of the column provided a financial benefit to the construction costs. In the concrete of the flower box at each column is the name of a thousand dollar benefactor.

Plate 10, HABS No. FL-323-10:

Plan and elevation of a section of the esplanade as it steps down a slope. Notes by Wesley Peters.

Note the "Z" shaped joining of two roof elevations. The tremendous expansion created by the hot Florida sun followed by the contraction caused by a sudden shower has always created problems at this point. Mr. Peters anticipated this problem in his note about the sliding joint, but it never was worked out in the field and it has plagued the maintenance people ever since.

The facia of the esplanade roof was to be of decorative copper. After some of the copper facia was in place, it became evident that was going to be too expensive for the project. Some of the facia was stripped from the edge of the roof and used as a form against which concrete was poured to make a similar shape. The concrete facia was then painted blue to green to match the patina of the copper. In order to accelerate the formation of the patina on the copper the following formula was used:

Formula for "FLW Esplanade Copper"
One Pint
50% - 20% bauhne muriatic
50% - water
4 teaspoons salt
1/4 pint urine

Note: See Florida Southern College, Esplanade (Walkway), HABS No. FL-323-E, for HABS photographs of this structure.

PLATE 11 POLK SCIENCE BUILDING
(COSMOGRAPHY BUILDING)

Plate 11, HABS No. FL-323-11:

A presentation rendering on illustration board. It was reported that this illustration has never been duplicated before. The notes are Mr. Wright's and read in their entirety:

"NATURE STUDY BY VISUAL INSTRUCTION - COSMOGRAPHY"

"Notes: * This building group is designed to afford the student an actual view of the features making up the world in which he lives and its relation as a planet to the universe.
* Here will be collections illustrating physiography, cosmology, astrology, mineral, flora, animal, ornithologycal, entomologycal, oceanothrographical and other related specimens pertaining to earth, air or sea. All (and more) are here provided for in classrooms and seen in aquariums, arboretums, observatories, zoos, in other buildings, etc. This building group incorporates the esplanade which is now a growing feature of the college and serves to adapt the college to the climate. In addition to eight classrooms especially equipped for illustration - there are two regular lecture rooms seating between one and two hundred students with cinema, etc. An observatory is also included with adjacent rooms for professors and another lecture hall underneath it seating between two and three hundred students.
* The whole deifice forms a most substantial and useful feature of the college group, designed to provide essential knowledge of the universe mostly lacking in current educational institutions or there merely suggested by books.
* This plant for visual instruction concerning our physical universe is directly and especially related to the horticulture and agriculture of Florida. Landscape architecture might well be a department here."

Although Mr. Wright expects that the science of the cosmos will be taught in this building, he wisely reserved a special section for citrus and phosphate instruction, the two major industries in Polk County, the home of Florida Southern.

Note: See Florida Southern College, Polk Science Building, HABS No. FL-323-F, for HABS photographs of this building.

PLATES 12-25 POLK SCIENCE BUILDING
(COSMOGRAPHY BUILDING)

Plate 12, HABS No. FL-323-12:

A simple floor plan of the Cosmography Building and used here as a key to more detailed floor plans.

Rooms 10 through 15, on the left, are the physics section detailed on Plate 18.

Rooms 16 through 28, in the center, are the biochemistry and chemistry section as detailed on plate misnumbered 12.

Rooms 29 through 33, on the right, are the earth and life sciences section as detailed on Plate 19.

Rooms 1 through 9 have no detailed plans.

Plate 13, HABS No. FL-323-13:

The second floor plan of the Cosmography Building used to key the following detailed floor plans.

Rooms 34 through 42, on the left, are the mathematics section as detailed on Plate 17.

Rooms 43 thorough 52, in the center, are the biology and chemistry section as detailed on Plate 15.

Rooms 53 through 55, on the right, are the physical chemistry and planetarium section as detailed on Plate 15. Under this section is the biochemistry research laboratory shown in detail on Plate 20.

Plate 14, (misnumbered Plate 12), HABS No. FL-323-14:

Biology and Chemistry section, ground floor plan.

Plate 15, HABS No. FL-323-15:

Biology and Chemistry section, second floor plan.

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Plate 16, HABS No. FL-323-16:

Physical, Chemistry, and Planetarium section.

Plate 17, HABS No. FL-323-17:

Mathematics section, second floor.

Plate 18, HABS No. FL-323-18:

Physics section, Ground floor.

Plate 19, HABS No. FL-323-19:

Earth and Life Science Section, first floor plan.

Plate 20, HABS No. FL-323-20:

Biochemistry Research Laboratory.

Plate 21, HABS No. FL-323-21:

Elevation of the Cosmography Building.

Plate 22, HABS No. FL-323-22:

Elevation of the Cosmography Building.

Plate 23, HABS No. FL-323-23:

Earth and Life Science section.

Plate 24, HABS No. FL-323-24:

Sections and portions.

(continue on next page)

Plate 25, HABS No. FL-323-25:

Shows structural details of a lecture room in the Cosmography Building. In the corner of this drawing is the clearest example of the 1" red square box with the initials FLLW used as a form of loga by Mr. Wright. It also shows his Florida and New York registration certificate numbers, #515 for Florida and #6239 for New York. Perhaps there was some question as to his qualifications for approving structural details and Mr. Wright used all his credentials.

Note: See Florida Southern College,
Polk Science Building,
HABS No. FL-323-F, for
HABS photographs of this
building.

PLATES 26-32 LUCIUS POND ORDWAY ARTS BUILDING
(INDUSTRIAL ARTS BUILDING)

Plates 26-32, HABS No. FL-323-26 thru -32:

Copies of the original blueprints as sent out from Taliesin. These may give some indication of why it was necessary to prepare additional drawings on the site, an example of which is Plate 32.

By using a grid module, it was unnecessary to dimension all portions of the building. No specifications accompanied the drawings. All information necessary to construct the building was included on the drawings.

Thirteen sheets were all that Mr. Wright considered necessary to detail a fairly complex building.

Note: Plate 31 is misnumbered Plate 32 on the front of the photograph.

See Florida Southern
College, Lucius Pond Ordway Arts
Building, HABS No. FL-323-G, for
HABS photographs of this structure.

PLATES 33-37 ANNIE PFEIFFER CHAPEL

Plates 33-37, HABS No. FL-323-33 thru -37:

The original blueprints for the Main Chapel. The pulpit and side rooms have been altered from Mr. Wright's design.

Plates 36 and 37 show the gigantic lantern which has caused this building to be referred to as "Cod's Bicycle Rack." The flat roof sections were designed to hold rain water that was to cool the building by evaporation. The marble chips on the roof soon turned a dark green with algae and the roof water heated up. Since very little evaporation takes place when the relative humidity is over 90%, the roof heated the building rather than cooled it. The roof also served as a mosquito breeding ground in Florida.

The great clear skylights in the lantern which allowed the passing clouds to be viewed by the congregation broke or leaked or both. They have been replaced with obscure wire glass.

Plate 33, HABS No. FL-323-33:

Sheet 1, Ceneral Floor plan.

Plate 34, HABS No. FL-323-34:

Sheet 2, Mezzanine floor plan.

Plate 35, HABS No. FL-323-35:

Sheet 3, Roof and lantern plan.

Plate 36, HABS No. FL-323-36:

Sheet 4, Elevations.

Plate 37, HABS No. FL-323-37:

Sheet 5, Cross sections.

Note: See Florida Southern College,
Annie Pfeiffer Chapel,
HABS No. FL-323-A, for HABS
photographs of this structure.

PLATES 38-41 WILLIAM H. DANFORTH CHAPEL
(MINOR CHAPEL)

Plate 38, HABS No. FL-323-38:

Floor plans. Also shows the relation of the minor chapel to the major chapel (Annie Pfeiffer Chapel).

Plate 39, HABS No. FL-323-39:

Sheet 2, General plan; ground floor plan.

Plate 40, HABS No. FL-323-40:

Sheet 7, Details and sections.

Plate 41, HABS No. FL-323-41:

Shows the window and stained glass panel details and the corrections that Mr. Wright penciled in on one of visits to the site.

Note: See Florida Southern College,
William H. Danforth Chapel,
HABS No. FL-323-B, for HABS
photographs of this structure.

PLATE 42-44 EMILE E. WATSON ADMINISTRATION BUILDING

Plates 42-44, HABS No. FL-323-42 thru -44:

Plans and elevations of the Administration Building. The first floor plans include a portion of the esplanade with its flower boxes. The roof of the esplanade over the boxes is left open, giving the roof plan the effect of an elevation when viewed from below. Additions have been made to this building which give it a more rectangular shape.

Plate 42 (misnumbered Plate 43), HABS No. FL-323-42:

First floor plan.

Plate 43 (misnumbered Plate 44), HABS No. FL-323-43:

Sheet 5, Second floor structural plan.

Plate 44 (misnumbered Plate 45), HABS No. FL-323-44:

Sheet 7, Elevations.

Note: See Florida Southern College, Emile E. Watson Administration Building, HABS No. FL-323-C, for HABS photographs of this structure.

PLATES 45-47 E.T. ROUX LIBRARY BUILDING
(BUCKNER BUILDING)

Plates 45-47, HABS No. FL-323-45 thru -47:

The only drawings left of the original library building that are still in the possession of Florida Southern. A fire in the site construction office destroyed many of the drawings of this and other buildings.

On the first drawing can be seen a number of field notes made during erection.

The reading room in this library is stepped down toward the center with desks on each tier. The round shape of the room creates interesting acoustical effects when one stands in the focus of the circle.

The building was designed to use natural daylight. The diamond shaped open light wells extended down from skylight on the roof, through the bookstacks, and to the basement. Since the building had to be used at night, desk lamps had to be added. These auxilary lights, however, were removed and hidden whenever Mr. Wright visited the campus.

This building has more of an oriental feeling than any of the other buildings on the campus designed by Mr. Wright.

Unfortunately, this library proved to be too small for a growing college and has been replaced by a new library with the same name.

Plate 45 (misnumbered Plate 46), HABS No. FL-323-45:

Sheet 2, Main floor plan.

Plate 46 (misnumbered Plate 47), HABS No. FL-323-46:

Sheet 1, Foundation and Lower floor plan.

Plate 47 (misnumbered Plate 48), HABS No. FL-323-47:

Sheet 5, Mezzanine Floor plan and wiring diagram.

Note: See Florida Southern College,
E.T. Roux Library, HABS
No. FL-323-D, for HABS
photographs of the library.

PLATES 48-50 CONCRETE BLOCK DETAILS

Plates 48-50, HABS No. FL-323-48 thru -50:

Mr. Wright designed the concrete blocks that were used on his entire project. The basic block was 36 inches long, 9 inches high and 3 inches thick. The blocks were laid up in two wyes with a 3-inch air space between wyes. This gave a hollow block wall 9 inches thick.

The blocks were made on the site by student labor who could produce 150 blocks a day.

Blocks had a rabbetted design worked into their ends. A groove decoration ran the length of the block and was designed to kill the hairline crack appearing between block courses. The decorative groove somehow got misplaced a few inches and Mr. Wright did not notice this design deviation until the campus was almost completed. Plate 50 shows this groove and the end design.

The method of laying block is interesting. Each block has a semicircular groove on each end and top and bottom as shown on Plate 50. The blocks were laid up a course at a time with no mortar. A pencil size reinforcing rod was laid in the horizontal groove. The round opening created by the grooves at the end of the blocks was then poured full with a very liquid grout. This grout would run down and fill the horizontal groove. A short reinforcing rod was then placed vertically. The final wall was reinforced in two directions and showed only a fine crack between courses.

Special blocks were made with 24 small rectangular and 2 larger 'L' shaped openings. Various colored glass inserts were then placed in these openings. The sunlight would play through these glass inserts and allow colored light into the rooms without windows. The pattern of these glass inserts is shown on Plate 48.

The two wye wall system had problems at corners, at angles, and when used in circular walls. Special blocks had to be designed for these conditions. Plate 48 shows a half scale drawing of special corner blocks for a 60 degree corner. Plate 49 shows a plan of blocks used in a curved wall. In some cases full scale drawings would be made of special conditions and patterns would be constructed from these drawings.

Plate 48 (misnumbered Plate 49), HABS No. FL-323-48:

Sheet 21, Library: Special corner block, all full size details.

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Plate 49 (misnumbered Plate 50), HABS No. FL-323-49:

Industrial Arts Building: Block schedule for amphitheater.

Plate 50 (misnumbered Plate 51), HABS No. FL-323-50:

Stretcher block.

PLATE 51 PLANETARIUM SEAT DETAIL

Plate 51 (misnumbered Plate 52), HABS No. FL-323-51:

Planetarium seat detail.

Mr. Wright, like many great architects, left nothing to chance, even the furniture. This plate shows the details of his seats designed for the Planetarium.

PLATE 52 MUSIC BUILDING

Plate 52 (misnumbered Plate 53), HABS No. FL-323-52:

Floor plan of the Music Building. Designed but never constructed.

PLATE 53 WATER AMPITHEATRE

Plate 53 (misnumbered Plate 54), HABS No. FL-323-53:

This rendering is of the water ampitheatre design for the edge of Lake Hollingsworth. It was never built. The esplanades can be seen leading back through the citrus grove. The illustrator must have never seen the site because Lakeland is in the hill country of Florida and the shore rises abruptly here.